

## GENUS—MESITES. Jen.

*Corpus elongatum, gracile, antice subcylindricum, postice compressum, nudum, squamis nullis. Caput depressum. Rostrum breve, obtusum: os terminale, rictu modico. Maxille debiles; superior margine ex ossibus intermaxillaribus omnino formato, maxillaribus retroductis et a labio partim celatis. Dentes minuti, acuti, in maxilla utraque uniseriati; in lingua et vomere biseriati; in ossibus palatinis et pharyngealibus nulli. Apertura branchialis amplissima, membranâ sex-radiatâ, subtergula profundè emarginatâ, haud isthmo annexâ. Pinnæ dorsalis et analis valde retropositæ, oppositæ. Pinnæ pectorales et ventrales parvæ. Pinna caudalis leviter emarginata.*

There can be no doubt, I imagine, as to this being an entirely new form, and a very interesting one, from the circumstance of its being at the extreme end of the family to which it belongs, and its very much departing from the usual characters of that family. I have referred it to the *Cyprinidæ*, taking that group in the enlarged view in which Cuvier accepts it; though by those who divide it into subfamilies it would probably be associated with the *Cobitidæ*, or made to constitute a distinct one by itself. It agrees with the *Cyprinidæ* in general in the form of its mouth, in the upper jaw having its margin entirely formed by the intermaxillary, the maxillary being present, but placed behind and partly concealed in the thickness of the lip, and in the want of an adipose; but it altogether departs from that family in the entire want of scales, of which there is not even a vestige in the dried skin, and in which respect it would seem to shew an affinity to the *Siluridæ*. Yet it has none of the other characters of the family just mentioned. On the other hand, in the backward position of the dorsal and anal fins, which are opposite to each other, it agrees with the *Esocidæ*. The pharyngeal bones are unarmed, but this deficiency is made up for by the strong curved teeth on the tongue, independently of the minuter ones in the jaws.

The intestine is extremely short and quite straight, measuring only fourteen lines in length from the pylorus to the anus, in a specimen two inches and a half long. The stomach is of an oval form, of considerable capacity, very membranaceous, with the cardiac and pyloric openings near together at the upper extremity, from the latter of which the intestine is immediately reflexed to pass off to the anus. In the specimen dissected, the stomach was much distended by a nearly perfect individual of the genus *Colymbetes*, which appeared to have been recently swallowed, and was scarcely at all altered. There are no cæcal appendages. The air-bladder is of an elongated oval form, and of considerable development.

Mr. Darwin's collection contains no less than three species of this new genus, differing but slightly from each other. Two are from the most southern parts of South America, the third from New Zealand.

## 1. MESITES MACULATUS. Jen.

PLATE XXII. Fig. 4.

*M. viridescens-fuscus; dorso et lateribus maculis crebris, hic et illic confluentibus, nigris; ventre niveo; pinnarum radiis nigro-punctatis.*

B. 6; D. 10; A. 16; C. 16, &c.; P. 12; V. 7.

LONG. unc. 2. lin. 8.

FORM.—Slender and very much elongated. Body anteriorly subcylindrical, compressed behind. Greatest depth not more than one-eighth of the entire length: thickness about three-fourths of the depth. Head rather depressed, about one-sixth of the entire length. Snout short and rounded; mouth at the extremity; the gape moderate, not quite reaching to beneath the anterior angle of the eye. Lower jaw ascending a little to meet the upper, and, when the mouth is open, appearing rather the longest. Intermaxillary fixed, forming the entire margin of the upper jaw, the maxillary being behind it, and, though of nearly equal development, not very distinct: both bones slender. Teeth small, but sharp-pointed, rather widely apart, arranged in a single row along the edge of the intermaxillary, and in the lower jaw; the series above consists of about eighteen, that below of about twenty-one: also a double longitudinal row on the tongue, each row containing five or six teeth, the anterior ones curved, and larger than any of those in the jaws: a similar double row, but of minuter ones, down the middle of the vomer; none, however, on the palatines or pharyngeans. Eyes rather large, their diameter contained about three and a half times in the length of the head, distant scarcely one diameter from the end of the snout. The nostrils appear to consist of only a single aperture in front of the eye, in the neighbourhood of which, and also above the eye, are several large pores. The opercle and subopercle taken together approach to an oblong form, the posterior margin being straight and nearly vertical: the subopercle is not much developed, nor very distinct. Gill-opening very large, the membrane thick, with six rays, deeply notched beneath, and not fastened down. The whole skin is perfectly smooth and naked, invested with mucosity. No appearance of any lateral line, unless a fine dark streak be so called, passing along the middle of the sides, and dividing them into two equal parts.

The dorsal and anal are opposite to each other, and both placed very far back, almost at the extremity of the body. They commence in nearly the same vertical line, a very little anterior to the commencement of the last third of the entire length; but the anal being longer than the dorsal, it extends nearer the caudal. The form of these fins is much as in the genus *Cobitis*. The dorsal has the first three rays simple, the rest branched: the anal also has the first three simple, the first very short. Caudal about one-eighth of the entire length, with a shallow notch, the principal rays branched. The vent is just before the anal. The ventrals arise from about the middle of the entire length, the distance from their insertion to the commencement of the anal being twice their own length. The pectorals are small, and rather narrow, equalling about two-thirds the length of the head or hardly so much: they are attached low down, but not quite so low as in the genus *Cobitis*.